

What is claimed is:

1. An antibody or an antigen-binding fragment thereof having specific binding affinity to an epitope of a PAK5 kinase polypeptide.
2. An antibody or an antigen-binding fragment thereof according to claim 1, wherein said antibody is a monoclonal antibody.
3. An antibody or an antigen-binding fragment thereof according to claim 1, wherein said polypeptide comprises the amino acid sequence set forth in SEQ ID NO: 30.
4. An antibody or an antigen-binding fragment thereof according to claim 3, wherein said antibody is a monoclonal antibody.
5. A hybridoma producing the antibody or an antigen-binding fragment thereof of claim 1.
6. A hybridoma producing the antibody or an antigen-binding fragment thereof of claim 3.
7. A method of detecting a PAK5 kinase polypeptide or a PAK5 kinase polypeptide domain fragment in a sample comprising: (a) contacting said sample with the antibody or antigen-binding fragment thereof of claim 1 under conditions such that immunocomplexes form, and (b) detecting the presence of said antibody or antigen-binding fragment thereof bound to said PAK5 kinase polypeptide.
8. A method of detecting a PAK5 kinase polypeptide or a PAK5 kinase polypeptide domain fragment in a sample comprising: (a) contacting said sample with the antibody or antigen-binding fragment thereof of claim 3 under conditions such that immunocomplexes form, and (b) detecting the presence of said antibody or antigen-binding fragment thereof bound to said PAK5 kinase polypeptide.
9. A PAK5 detection kit comprising: (a) a first container means containing the antibody or antigen-binding fragment thereof of claim 1 and (b) a second container

- means containing a labeled binding partner of said antibody or antigen-binding fragment thereof.
10. The PAK5 detection kit of claim 9 further comprising at least one additional container means comprising one or more of the group consisting of wash reagents and reagents capable of detecting the presence of bound antibodies.
 11. A PAK5 detection kit comprising: (a) a first container means containing the antibody or antigen-binding fragment thereof of claim 3 and (b) a second container means containing a labeled binding partner of said antibody or antigen-binding fragment thereof.
 12. The PAK5 detection kit of claim 11 further comprising at least one additional container means comprising one or more of the group consisting of wash reagents and reagents capable of detecting the presence of bound antibodies.